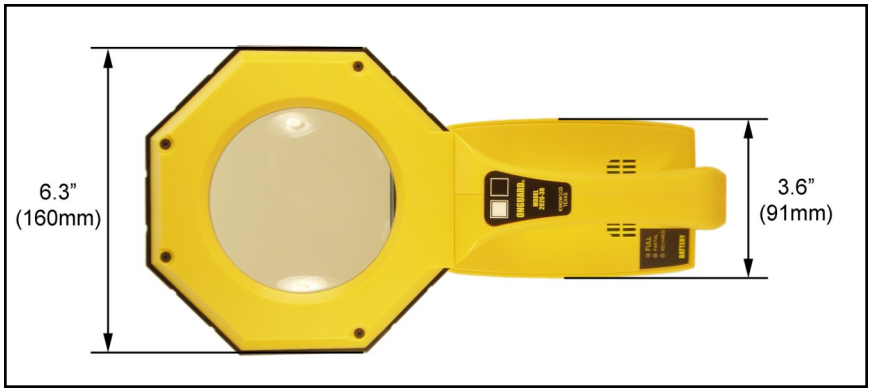
FIGURE 9. Side view dimensions

FIGURE 10. Top view dimensions



ONGUARD®

ONGUARD IS A REGISTERED TRADE NAME AND TRADE MARK FOR ALLESTEC CORPORATION

ONGUARD®

PORTABLE INSPECTION MAGNIFYING LAMP

12VDC POWERED WITH EXTENDED 2 HOUR BATTERY LIFE

USER OPERATING GUIDE

MODEL 2020-38

ALLESTEC

810 Russell Palmer Road
Kingwood, TX 77339
P.O. Box 6092
Kingwood, TX 77325
Phone: 281-359-1519
Email: info@allestec.com

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CAUTIONS Read the User's Manual Before Using This Unit.

- Do not use while driving.
- Do not drop or throw magnifier lamp.
- Always charge lamp battery in a dry location.
- Keep dirt off of lens to keep it from scratching.
- Do not operate the lamp without the clear fluorescent light shield.
- Do not immerse this magnifier in water. This unit is not waterproof.
- Keep children away from the magnifier lamp. This product is not a toy.
- Keep sharp objects away from lens – it is Ploycarbonate and can scratch.
- Never look directly into the lamp or shine the light into another person's eyes.
- Replace bulb or batteries with type indicated in Specifications in the User's Manual.
- Do not crush, cut, pull or expose charging adapter cords to extreme heat or sharp edges.
- Position charge adapter cords so that they do not become entangled or become a safety hazard.
- Do not substitute power cords or charging adapters. Only charge batteries with supplied wall outlet AC adapter.

RISK OF FIRE OR INJURY TO PERSONS. CHARGE ONLY WITH ORIGINALLY SUPPLIED BATTERY CHARGER.

WARNINGS

- Keep combustibles away from magnifier lens – extreme heat can cause fires.
- Contains non-spill sealed lead acid batteries. Batteries must be recycled or disposed of properly.
- DO NOT dispose of batteries in fire, as this may result in an explosion.
- DO NOT open battery or short circuit, this may cause the battery to leak or get causing personal injury. Go online to locate nearest battery disposal facility.

3.4 REPLACING THE BATTERY

Turn off the lamp. Remove the lamp handle assembly as well as the DC cigarette light cord. Remove the retaining screw (Figure 5B) at the rear inside edge of the battery compartment. Remove the battery retainer and then disconnect the two wires at the battery terminal. Carefully remove the battery and discard it in accordance with local laws. Insert the new battery observing the polarity markings on the inside edge of the battery compartment. Reinstall the terminal strips and then the battery retainer. Charge the new battery prior to utilizing.

4.0 SPECIFICATIONS and REPLACEMENT PARTS

Battery: 3.4 AH, 12VDC gel cell. P/N 20202707.

Battery life: Minimum 2 hours with fully charged battery at ambient 72 deg. F (22 deg. C), continuous at sea level.

Lamp: Included in unit - 18 Watt, 5100K cool white color temperature. P/N 20202623. Warm white P/N 20202047.

Lens: Hard coated polycarbonate, 3.8" (96mm) viewing diameter. 5 diopter. P/N 20202581. Suggested distance from subject to center of lens utilizing 5 diopter: ~4.5 inches (114mm).

Fluorescent lamp is 18 watts, Circline T6 brand.

Nominal operating temperature: 0 deg F (32 deg. C) to 120 deg. F (48 deg. C).

Total weight: 5.63lbs (2.55kg).

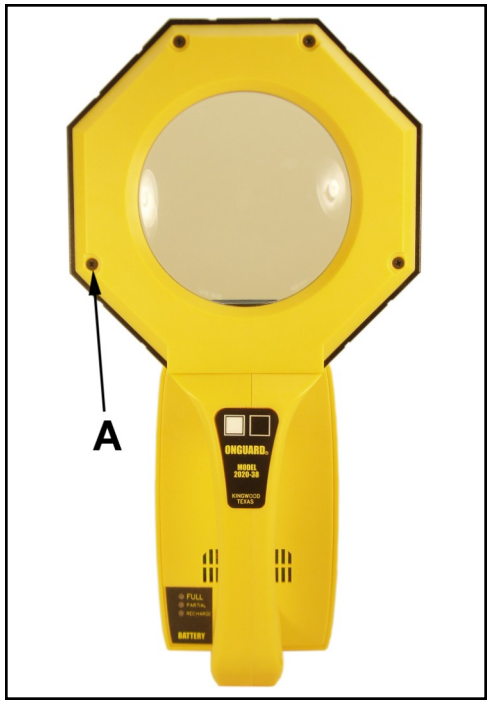
12VDC Charger P/N 20202241 ● Car battery power cord P/N 20202704 ● Internal battery power connector P/N 20202698.

Specifications are subject to change without notice.

5.0 LIMITED WARRANTY

Allestec Corporation will provide warranty for the 2020-38 lamp for a period of three months. Allestec agrees to repair or replace any component or subassembly it deems necessary to fulfill the obligation of the warranty. The warranty does not cover abuse to the unit, mechanical or electrical. Also not covered under the warranty is water, chemical, particle or humidity damage, acts of God, lightning and other external, unknown influences. Warranty is void if any protected, secured screw bond has been broken. The warranty does not cover the battery. Since different battery manufactures are utilized, the user must contact the battery provider as indicated on the battery itself. The warranty does not cover the fluorescent bulb. To service the unit, send the magnifier lamp to Allestec and provide a contact name with a phone number. State the nature of the problem, if known. Allestec has the right to refuse warranty if the product has demonstrated user abuse or neglect.

FIGURE 8. Top view indicating lens retaining screws.



3.2 REPLACING THE MAGNIFYING LENS

Refer to figure 8A and remove the four flat head screws. Take the top lens retainer off then remove the lens. Carefully locate replacement lens into the guide, replace the lens retainer. When tightening down the screws, first screw them down till just taught, then cross tighten each screw.

3.3 REPLACING OR EXCHANGING THE LAMP

Overtime, the glass edges of the fluorescent lamp, on each side electrical connector start to darken. When the darken area shows beadlike appearances the lamp should be replaced. Remove the lamp handle assembly from the battery compartment. Wear protective goggles for this installation procedure. Unplug the DC cord connecting into the bottom of the handle assembly. Remove the three screws on the side of the clear lamp cover (Figure 3B). Carefully remove the lamp from the reflector ring. Observing the orientation placement of the lamp electrical connection, slowly pry off the 4-connector wire assembly from the pins of the lamp. Reinstall the connector to the new lamp and then place the lamp into the retaining ring. Verify the lamp electrical connector is placed correctly, reinstall the clear lamp cover.

FEATURES

- Portable operation
- Interchangeable diopter lens
- Interchangeable color temperature lamps
- High quality polycarbonate case construction
- Large battery for over two hours of continuous operation
- Intense illumination on objects for the most demanding applications
- Compartment for storing extension cord to allow 8’ extension connection to a 12VDC car receptacle

APPLICATIONS

- Nature
- Biology
- Medical
- Schools
- Hobbies
- Scientific
- Forensics
- Pathology
- Chemistry
- Laboratory
- Electronics
- Inspections
- Archeology
- Universities
- Dermatology
- Manufacturing
- Quality Control

1.0 PRELIMINARY PROCEDURES

1.1 INTRODUCTION

The Allestec Onguard magnifying lamp is designed to be utilized in commercial and industrial applications. The application of an abundant amount of light energy provided by the Onguard reveals the most intricate structure of any specimen under magnification with the convenience of portable, continuous operation for up to 2 hours.

1.2 OPERATING STATEMENT

Read this manual thoroughly prior to utilizing the Onguard magnifying lamp. Read the warning signs located on the bottom of the lamp housing prior to operating. Do not use this lamp inconsistent to the applications it is designed for.

1.3 REMOVING CONTENTS FROM SHIPPING BOX

Carefully remove the upper lamp-handle assembly and the battery box. The battery is located below the battery retainer. The battery charger and 12VDC car adapter are located below the lens assembly. Make sure all components are removed from the box.

1.4 ENGAGING LAMP ASSEMBLY BACK TOGETHER

Take the coiled cord DC connector (Figure 5-A) and slide the flat part under the tab of the lamp housing. Plug the connector into the bottom of the lamp housing. Carefully align the cams at the bottom of the lamp assembly so they engage with the cams located at the edge of the battery compartment, then push down handle to snap the two halves together. It is better to have the battery compartment on a sturdy surface than try to bring the two pieces together while holding them.

WARNING: DO NOT PLUG THE 12VDC CIGARETTE LIGHTER IN THE LAMP CHARGING RECEPTACLE TO CHARGE THE BATTERY. ONLY USE THE PROVIDED CHARGER TO CHARGE THE LAMP BATTERY.

1.5 CHARGING THE ONGUARD LAMP BATTERY

Prior to utilizing the lamp, it is recommended to bring the battery up to operating charge level. Plug the battery charger in a 115-230VAC socket and connect the DC plug into the charging receptacle located in the back of the handle Figure 1A. Charge the battery until the red LED on the plug-in charger turns green, typically 12 hours. Remove the charger from the wall outlet when complete.

FIGURE 1. 12VDC OUTPUT 100-240 VAC BATTERY CHARGER

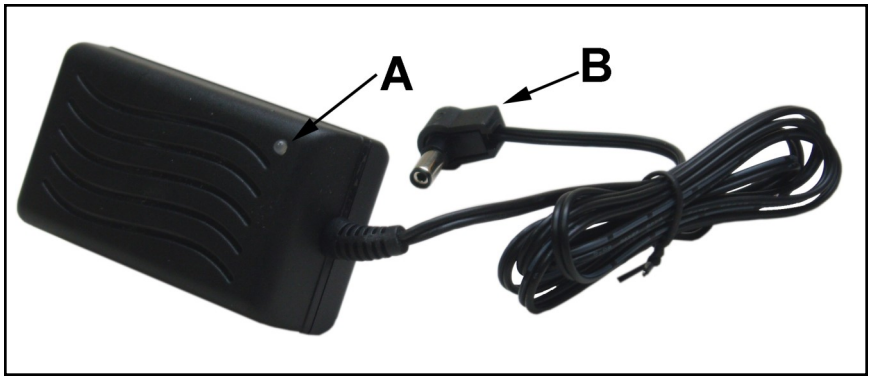
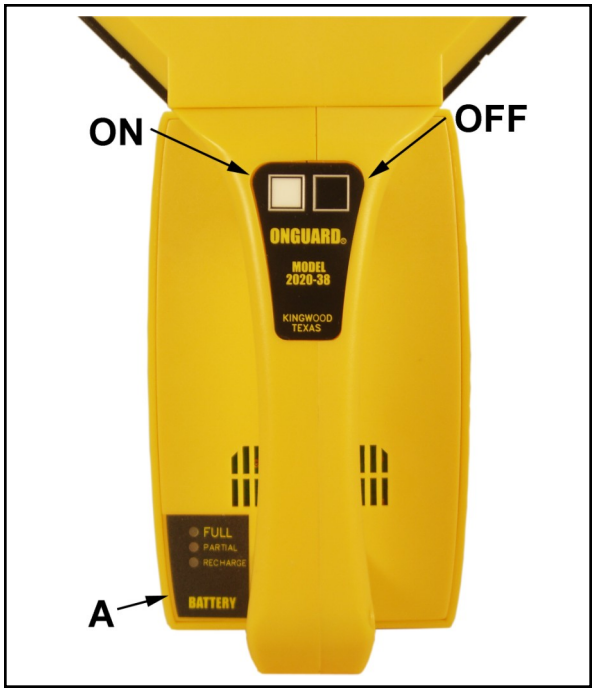


FIGURE 7. Switch and LED functions



2.4 MAGNIFYING LENS

The Onguard is supplied with a 5 diopter hard coated, polycarbonate lens. At this writing, there are plans for more power options.

2.5 FLUORESCENT LAMP

The Onguard comes standard with a 18 Watt, 5000K fluorescent lamp. This color temperature is referred to as a cool white. Daylight and warm white are also available.

3.0 SERVICE

3.1 CLEANING THE MAGNIFYING LENS

If the lens has dirt sediment on the surface, remove the lens as described in section 3.2. Rinse the lens under running cold water, allowing the water to remove the sediment till all sediment is washed off. Pat dry the lens with a clean, dry, soft cotton cloth. Use a standard window cleaner to clean the lens and then secure it back into the housing. If the lens does not need to be removed, proceed with the cleaner and cloth to clean the lens. Commercially available lens cleaners can be utilized on the lens.

2.0 OPERATIONAL PROCEDURES

2.1 OPERATING THE LAMP

Depress the ON switch located on the top, left hand side of the handle. The switch to the right will turn off the lamp. The lamp will stay on continuous during the length of the battery source. When the battery cannot sustain a consistent luminous intensity for the lamp, Onguard will automatically turn off. The three battery indicator LED's give approximate status of remaining charge left. When the battery is mostly discharged, there may not be enough starting energy to turn on the lamp even though the intermittent LED was on when the lamp was turned off. Recharge the battery.

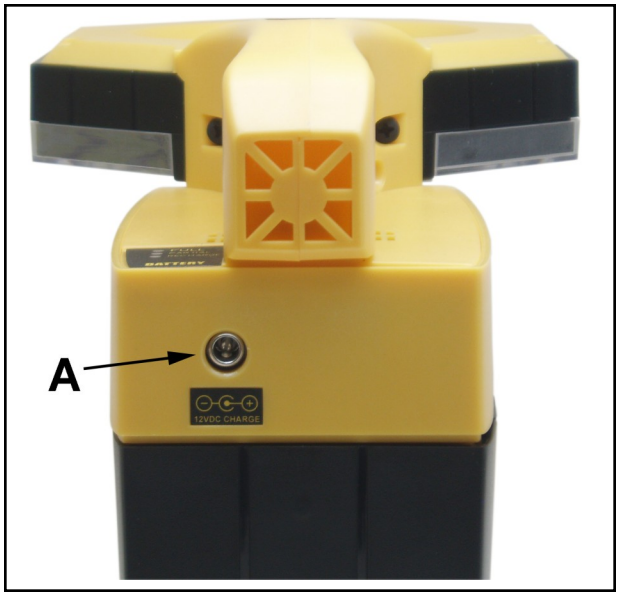
2.2 VIEWING OBJECTS THROUGH THE MAGNIFING LENS

With the magnifier assembly disengaged from the battery holder, move the assembly close or away from the object of observance until the image is crisp clear. Keep the lamp parallel to the observation surface to avoid distortion. The lamp assembly by itself (disengaged from battery pack) or when connected to the battery pack may be operated in any position.

2.3 BATTERY LIFE

Under normal operating temperature conditions, 70 deg. F (21 deg. C), sea level altitude, battery less than 3 years old, the battery will last for 2 hours continuously. Figure 7A shows the green, yellow and red LED's to indicate battery life. Each LED represents approximately 40 minutes of battery life when the battery is fully charged. Batteries that are not utilized still lose a certain percentage of charge every month. As the battery ages over the years, the 40 minute increments will diminish with time. Once the battery reaches a certain operating voltage, the lamp will automatically turn off.

FIGURE 2. 12VDC CHARGING RECEPTACLE



1.6 OPENING THE LAMP HOUSING

The lamp upper housing is designed to be separated from the lower battery compartment (clamshell design) by pressing the disengaging latch (Figure 3). The lamp comes supplied with the shorter cable that connects the lamp to the battery (Figure 5) and is stored above the battery. This detachment allows the lamp magnifier to separate from the battery for operating freely without the battery attached.

1.7 DISENGAGING THE LAMP ASSEMBLY FROM BATTERY BOX

Push the button located on the battery case with thumb (Figure 3), raise the handle to disengage lamp assembly from battery. The lamp can now be maneuvered in proximately to the observing subject with the power cord assembly attached.

1.8 CONNECTING THE ONGUARD TO A CAR BATTERY

As indicated in section 1.6, open the battery compartment of the lamp. Unplug the DC connector (Figure 4) connected to the bottom of the lamp assembly. Take the coiled cord (Figure 6) and connect the small connector to the same receptacle. Run the card under retaining tab of Figure 4B. Connect the other end of the cord to a car cigarette lighter. When connected to a car battery, the status LED's continue to indicate battery voltage level.

NOTE: The car battery cannot be utilized to charge the lamp.

FIGURE 3. Side view of lamp showing release latch (A) and retaining screws (B) to remove lamp guard.

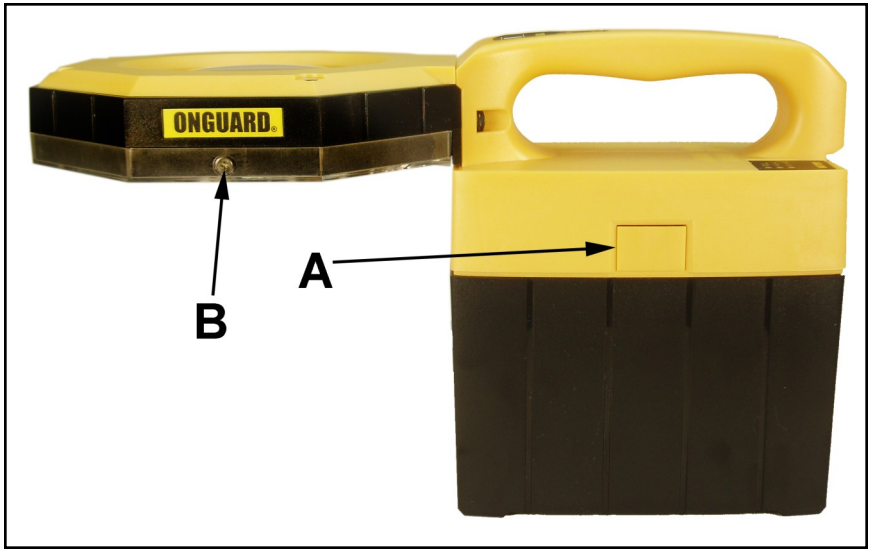


FIGURE 4. Upper lamp ballast assembly removed showing 12VDC power connection into bottom of lamp.

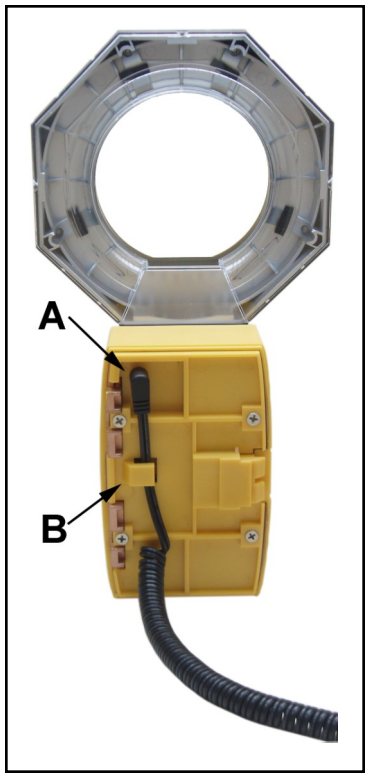


FIGURE 5. Image showing the upper half of the lamp removed. The plug (A) needs to be inserted into the receptacle (FIGURE 4A) when the unit is removed from the shipping box.

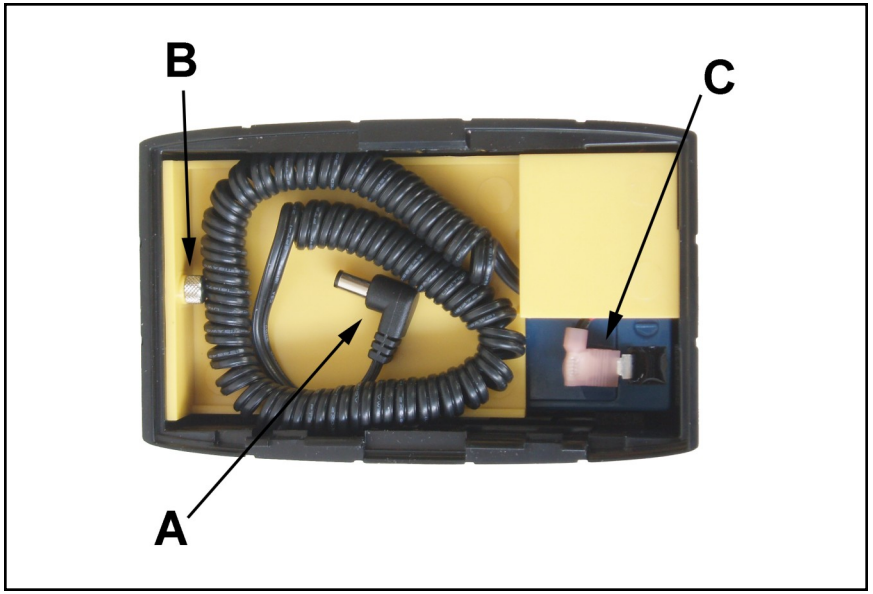


FIGURE 6. CIGARETTE LIGHTER CORD.
Unplug the connector (Figure 5A**)** from the lamp base then plug this cord into the same receptacle. Plug the other end of this cord (Figure 5B) into a ca cigarette lighter.